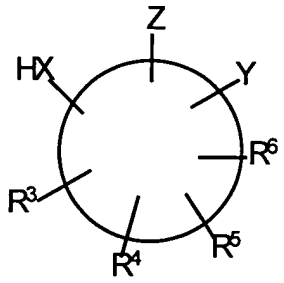
Please amend pending claims 1, 3, 5, 6, 7, 9, 11, 16, 17, 19, 20, 21, 22, 24, 26, 29, 30, 32 and 34, so that the rewritten claims read as follows:

1. (Amended) A method of

a) synthesis of a linear or cyclic peptide,

b) synthesis of a C-terminal modified peptide, or

c) on-resin cyclisation of a peptide molecule, comprising the step of linking a cyclic aromatic or alkyl auxiliary compound of General Formula I to an amine nitrogen atom




I

in which the ring optionally comprises one or more heteroatoms selected from the group consisting of nitrogen, oxygen, and sulphur;

is of 5 to 7 atoms;

comprises 3 carbon atoms substituted respectively by XH, Z, and Y; and

is additionally substituted by groups $R^3$ and $R^4$ when the compound is a 5-membered ring, or is additionally substituted by groups $R^3$, $R^4$, and $R^5$ when the compound is a

6-membered ring, or is additionally substituted by groups $R^3$, $R^4$, $R^5$ and $R^6$ when the compound is a 7-membered ring, in which

X is oxygen, sulphur, $CH_2O$-, or $CH_2S$-;

Y is an electron-withdrawing group;

Z is any group which allows the formation of a covalent carbon-nitrogen bond; and

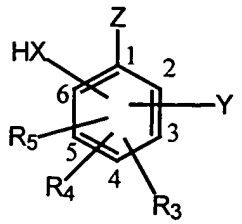
$R^3$, $R^4$ and $R^5$ are each independently hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, arylalkyl, substituted arylalkyl, heteroaryl, substituted heteroaryl, alkoxy, aryloxy, XH or Y, or a covalent linkage to a solid support, and

in which $R^3$ and $R^4$, $R^4$ and $R^5$, or $R^5$ and $R^6$ can optionally together with the ring form a 5-, 6-, or 7-membered ring, thereby to facilitate conversion of the amine to an amide.

3. (Amended) A method according to claim 1, in which Z is an aldehyde, alkylalcohol, alkylhalide, or a ketone, or is a halogenated $C_{1-3}$alkyl group.

5. (Amended) A method according to claim 4, in which the halogen is iodine, bromine or chlorine.

6. (Amended) A method according to claim 1, in which the auxiliary compound is of general Formula II

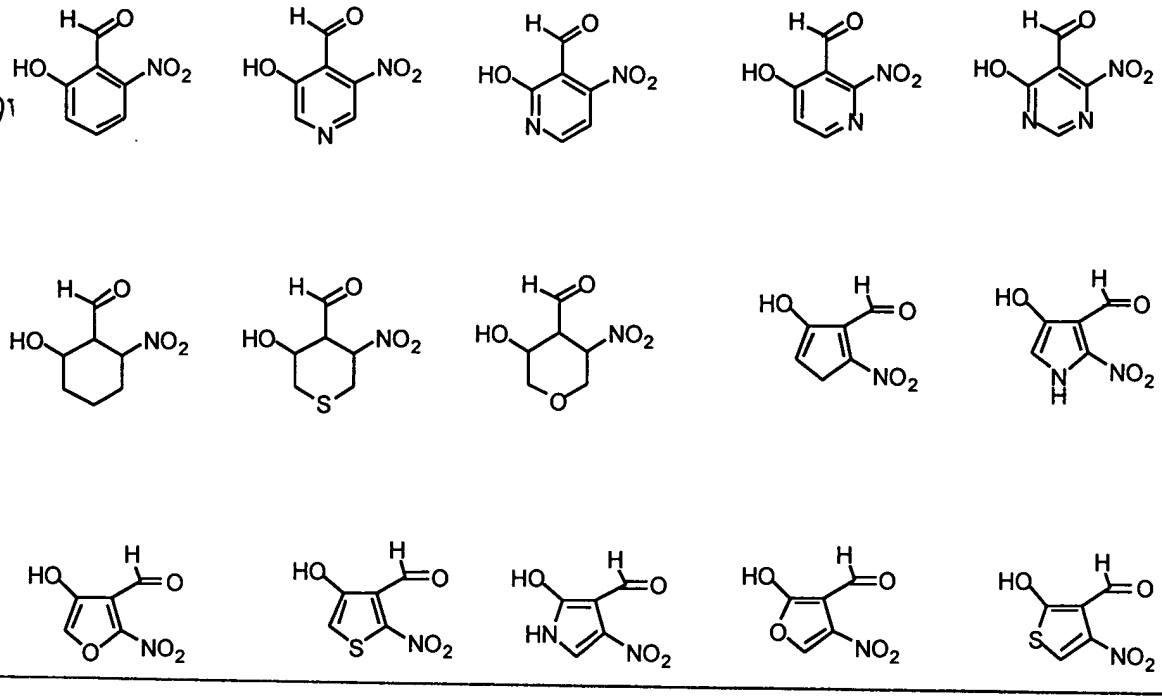



II.

7. (Amended) A method according to claim 1, in which the XH group is at position 2 or 3 in General Formula I or General Formula II, and Y is at any other position.

9. (Amended) A method according to claim 7, in which Y is at position 6.

11. (Amended) A method according to claim 1, in which the auxiliary compound is selected from the group consisting of



16. (Amended) A method according to claim 1, in which $R^3$, $R^4$, $R^5$ and $R^6$ are independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, hydroxy, alkoxy, aryloxy, and a covalent linkage to a solid support.

17. (Amended) A method of synthesis of a cyclic peptide, comprising the steps of

a) synthesising a linear peptide to be cyclised,

b) linking an auxiliary compound as defined in claim 1 to a desired primary amine of the linear peptide,

c) activating a desired carboxylic acid to effect cyclisation, and where necessary inducing ring contraction, and optionally

d) removing the auxiliary compound after complete N acylation.

19. (Amended) A method according to claim 17, in which the auxiliary compound is of General Formula III, and the auxiliary compound is removed by photolysis.

20. (Amended) A method according to claim 17, in which steps a) to d) are performed on a solid support, and are followed by cleavage of the cyclic product from the solid support, and if desired, removal of side chain protecting groups.

21. (Amended) A method according to claim 17, in which activation of the C-terminal carboxylic acid is performed in the presence of an auxiliary compound of General Formula III, and the cyclisation is performed by attaching the auxiliary compound to the desired amine via the Z-group.

22. (Amended) A method of synthesis of a large peptide with a native peptide backbone, comprising the steps of

a) synthesising a set of peptide fragments to be linked to form a large peptide,

b) linking an auxiliary compound as defined in claim 1 to the primary amine of the first peptide fragment,

c) activating the carboxylic acid of the second peptide fragment,

d) adding the second peptide fragment to the first peptide fragment and forming a peptide bond between the two fragments, and optionally

e) removing the auxiliary compound after N acylation is complete.

24. (Amended) A method of synthesis of a difficult peptide sequence, comprising the steps of

a) linking an auxiliary compound as defined in claim 1 to one or more nitrogen atoms in peptide bonds of a peptide linked to a solid support,

b) synthesising the complete peptide using standard solid phase synthesis methods, and optionally

c) when synthesis is complete, removing the auxiliary compound.

26. (Amended) A method of backbone linkage for synthesis of a linear peptide, comprising the steps of

a) using an auxiliary compound as defined in claim 1 as a linker linking the α-nitrogen of an acid residue in the desired peptide to a solid support,

b) assembling the linear peptide using standard solid phase peptide synthesis methods, and optionally

c) removing the side chain protecting group(s), and/or

d) cleaving the peptide from the solid support.

29. (Amended) A method according to claim 26, in which Y is nitro in position 6, XH is in position 2, and cleavage is performed by photolysis.

30. (Amended) A method of on-resin cyclisation of a linear peptide, comprising the steps of

a) using an auxiliary compound as defined in claim 1 as a linker linking the α-nitrogen of an amino acid residue in the desired peptide to a solid support,

b) synthesising a linear peptide on a solid support, using standard solid phase peptide synthesis methods,

c) deprotecting the desired amine and carboxylic acid groups,

d) activating the carboxylic acid group to perform cyclisation, and optionally

e) deprotecting amino acid side chain groups, and/or

f) cleaving the cyclic peptide from the solid support.

32. (Amended) An auxiliary compound according to the General Formula as defined in claim 1, linked to a support suitable for solid phase peptide synthesis.

34. (Amended) A kit for use in synthesis of a peptide, cyclic peptide, comprising:

a) an auxiliary compound as defined in claim 1, or

b) an auxiliary compound as defined in claim 1, linked to a solid support, together with one or more reagents for solid phase peptide synthesis.

Please add new claims 35-38, as follows:

35. (New) A method according to claim 15, in which $R^3$, $R^4$ , $R^5$ and $R^6$ are independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, hydroxy, alkoxy, aryloxy, and a covalent linkage to a solid support.

36. (New) An auxiliary compound according to General Formula II as defined in claim 6.

37. (New) An auxiliary compound according to General Formula III as defined in claim 12.